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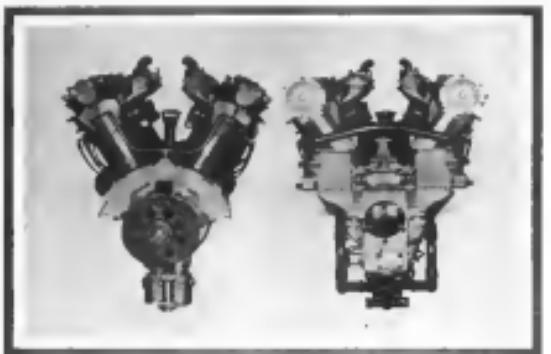
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GENERAL MANAGER

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AVIATION

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Hudson Airport

A CENTRALLY located airport which New Yorkers could reach by means of the existing rapid transit facilities has for years been considered one of the greatest necessities of civil aviation. The various flying fields situated in Long Island and New Jersey which have so far been used as the aerial terminals of New York all have the drawback of being too far from the center of the city and necessitating complicated transportation to the fields, with transfers from subway to elevated, thence to motorbus or street car, and from the latter to the field. The same situation obtained with regard to airports terminals, the stations at Flushing, Port Washington, being points in the case. The net result of this situation was that, it being nothing short of an expedition to reach a flying field in the neighborhood of the city, the average New Yorker went to an airport only on exceptional occasions, such as when a flying meet was announced. And even then inadequate or complicated means of transportation kept many thousands away.

The management, by Aeromarine Airways, of Hudson Airport, at 79th Street off Broadway Drive, marks a happy change and an important improvement in New York's airport situation. The new airport is only three blocks from the nearest subway station, and offers besides a complete exchange of a economy facilities such as sheltered waiting rooms, telephone, etc. Thus the average aerial passenger is enabled to reach his home or office at no more time than it would take him from a railroad terminal or a subway station.

Here, then, is an improvement which should make air transport appeal much more strongly to men in a hurry to get somewhere else; has been the case before. Indeed, it seems futile to save my 50 per cent of the time of travel by using aircraft and then lose half of the gain by poor terminal facilities. This is particularly true with respect to comparatively short flights, for these loss in time at terminals often nullifies the whole advantage of the fast transportation provided by aircraft.

Hudson Airport has the further advantage of enabling the non-flying public to see from the comfort of waiting rooms afforded by Aeromarine Airways, the evolution of flying boats engaged in a public service. By witnessing aircraft come and go, and take on and discharge passengers in the usual manner of steamships, the outside of the man in the street is bound to be considerably mollified. Aircraft will assume in his eyes the role of nearly another means of fast transportation, and once that airline becomes control, confidence in public air transport will follow as a natural consequence.

Now that aeroplanes have obtained the logical terminal in New York City, there still remains the question of a centrally located airport for land machines.

Civil Aviation Statistics

CONSIDERABLE interest attaches to the statistics of civil aviation in the United States which the Aeromarine Chamber of Commerce recently submitted to the Department of Commerce. The report, which is reproduced as this issue, shows conclusively that aircraft engaged in commerce, when operated by responsible firms who know the value of safe flying and effective maintenance, suffer from a singularly small number of accidents. It also shows that the vast majority of accidents occur in connection with pleasure flying, that is exhibitions and joy riding furnished by enterprises which lack the means of ensuring proper maintenance and also lack judgment as to what does and does not constitute safe flying. Finally, it affirms that the lack of suitable airports, emergency fields, weather forecasts, markers, etc.—in short, all that goes to make up that complex problem known as "ground organization"—is to be blamed for all accidents that are not so ascribed to lack of judgment.

We earnestly hope and wonder that, lacking federal air legislation there should have been so few accidents during the twelve months under review. That this should be so perhaps due to improvements in the airplance themselves—most of them in use being converted war products—due to a growing realization on the part of aircraft operators that it pays as the long run not to take chances.

And taking chances does not merely mean not shipping into a field a hundred yards square and herded with trees. It also means going up without being certain that every wing, every tailplane, every seat and screw pin, in brief everything, is in the right place and in the right condition. In this connection J. E. Whidbee, Superintendent of the Air Mail Service, told an instructive story at the last Aeromarine Executives' Luncheon. Some time ago the Air Mail instituted a rigid inspection system so that every one of their ships was subjected before every flight. After a certain time the pilots began to complain that this system was merely red tape and that it did not have any practical value. To convince the fans of the contrary, Mr. Whidbee agreed to sail the "system" for a week, so the results would speak for themselves. The result was that whereas there had been no forced landing for months while the inspection system was in operation, the week of operation without the system produced four forced landings. The lesson was so obvious that there was no more complaining about the inspection service, which was reinstated.

The record of safety and reliability established by the Air Mail during the past year, with no fatal accidents in operation and 99 per cent of the scheduled flights completed, affords by the way the best vindication of careful maintenance.

House all forced landings, crashes, etc. Yet the number of accidents in which persons were killed or injured, totals but twenty-four, leaving 1,616 total, 22 injured.

See *Response for Safe Flying*

Experience has taught that, in safe flying, there are the following requests—

1.—Aeromarine sound, aerodynamically and structurally.

2.—Designs of sufficient field and port which operates satisfactorily.

3.—A competent, conservative pilot and navigator.

4.—Aeroplane and emergency landing fields, sufficiently close together to insure gliding to safety.

5.—Native-weather forecasts specialized and adapted to the needs of the aviator.

6.—National code chart of our routes.

Analyzing the causes in which the twenty-four accidents are attributed. Of the six fatalities three were due to crashing, two to gross carelessness on the field, and one to storms. Not a single person, passenger or pilot, lost his life in straight commercial flying. And with federal regulation, insuring standard and enforcing proper field policing and protection, it is believed certain most of these fatalities would have been avoided.

There were twenty-one persons injured in the twenty-four accidents. These injuries were due to causes which could have been removed by federal regulation or supervision—bad landing fields, air routes and weather reports being fully available, had the field help been more disciplined, had the pilots been more alert through consciousness of increased responsibility and had there been strict inspection of aircraft, engines, accessories and supplies.

See *Code of the Flying Club*

It is estimated that during the calendar year 1921, 1,200 aircraft were engaged in civil flying in the United States and that they flew 6,500,000 miles and carried 200,000 persons. These figures are conservative and indicate both the strength and flying base flying. Many persons may carry by means of air routes, but they affect only available miles into the comparative safety of the total aerial activity.

A survey of the statement flying shows that 114 accidents occurred, not including those that involved government-owned aircraft. Two of the 114 occurred in January, one in February, four in March, six in April, sixteen in May, thirteen in June, twenty in July, twenty-eight in August, sixteen in September, eight in October, twelve in November and one in December, progressing and increasing as the flying season advanced and waned. The accidents were reported from all parts of the United States—thirty being in the East, forty-three in the Middle West (which like most of the machine and generally speaking the best natural landing fields) and forty-one in the Far West.

What Caused the Accidents

The 114 accidents resulted in death to forty-nine persons and injury, more or less serious, to eighty-nine. In forty-eight instances there were no fatalities. The forty-nine lives were lost in twenty-four accidents and injury to the eighty-nine persons resulted in forty-two accidents.

Each of the 114 accidents was attributed by deficiency in one or more of the six necessary requisites for safe flying. Forty-nine were attributed to the pilot, perhaps through carelessness, perhaps inexperience, perhaps had judgment complicated with other factors. There is no doubt that a good pilot can give a proper machine to safety with greater chance of success than a poor pilot can operate a first-class craft. Therefore, of the very last of the six requisites we place the federal supervision and inspection of flying. During the war rather more than 17,600 young men were trained to fly. The capability of flying cannot be retained permanently without practice, nor can it be maintained at a high degree of competency without regular examination on a routine standard for all flying throughout the United States. The same is true of aerial navigation. Both pilot and navigator (many times they are identical) are of equal importance in safeguarding the lives of travelers by air.

Twenty accidents are attributed to whole or in part, to inadequate landing fields or to the total lack of landing fields. Here is a story directly related upon the flying government. During the war the Army and the Navy acquired many materials, most of which were surplus to their needs. The fragmentary remainder has been slightly edited so as by the Air Mail, municipalities and private enterprise, but the Federal Air Service is today woefully lacking in airports for even the 1200 craft in operation.

Look for Weather Reports

While only four accidents are attributed to the lack of weather reports and ten to the lack of clearly defined routes or instructions in traveling between air routes, it is certain that these errors cannot be developed until these factors are not in operation. One of the worst accidents in my flying history is attributed to the lack of weather reports. As one was made and the other military, they can not be included in the end survey, though in these results they were as harmful to good flying prospects as though they had occurred to private individuals.

On March 12 a naval aviator, according to press reports, developed into a search near Pensacola, Fla., and failed to land. The pilot was missing and no survivors other than his mother had any knowledge on it. In either case, the fatalities would have been prevented had proper weather existed.

On May 28 a large Army plane crashed at Matherne, Mo., killing its seven occupants, who included some of the best-known flyers in military and civil aviation. According to the report of the Inspector General's investigation, the accident was not due to defects in the machine nor to inexperience on the part of the pilot, but to the pilot's failure to check the shop floor and of which he had not been warned. The investigators above referred to recommended that steps should be taken to attain a system for interchanges of weather conditions and weather forecasts between flying clubs maintained by the various armadas, including Army, Navy, Mail Service and Coast Guard Service. It was further stated: "The interchange of weather conditions in a cross-country flight route as suggested by the members of the engine and pilot clubs is a healthy development. In these lines, except in emergencies, no emergency funds should be undertaken until available information on conditions on the way has been obtained."

Commercial cross-country or otherwise flights, it is evident, should be encouraged with safety and there is full protection afforded by available civil weather reports and co-ordinating them with the various government reports. This serves obviously, cannot be provided by the several states.

Inspection for Impairment

Equally as important with learning the qualifications of pilot and navigator is the inspection of aircraft and engine. One of the 114 accidents, presented in detail, attributed to funds which proper inspection probably would have revealed, four concerning the plane, two the engine and one an air compressor, gas or oil. This inspection should be made at frequent intervals by federal authority.

What is an unassisted expert of motor cars are required to qualify and find motor cars are periodically placed under inspection, motor cars are required to learn and assume to take over most of flying machines who are at the present time, with the exception of the pilot, not only qualified to passengers, but in many persons as the greatest. By the standard of control ways left to the various States, the inspection reflecting this unfortunate condition would never result.

One accident attributed to the attempt of the pilot to start an engine machine, two from were lost. An investigator from the War Department, who had been in the flying service, had passed through many courses and which, my investigation shows, had been in at least four crashes previous to the final one. I found that the machine had been repaired by amateurs, that several of the sprays and dangerous were published, some of them in four places. It was the going away of these sprays that undoubtedly caused the wings to collapse. The plane had

left out of doors in the open field all winter and was wind-blown and blown a the full length of the field—about 1000 yards and twisted it over end. This spring it had been loaded back to its original position and put together again, but at angle, so that the sprays were not in line. I found that the owner of the plane had—who is also a pilot—had himself refused to fly the machine when the young man who took it up on an final trip was advised to because the pilot."

In the lack of any governmental examination and inspection, the legitimate manufacturers and operators have been forced to do their own. They must rely on their products, hold their own tests of members to locate and find out a reasonably brief period of time. As flying increases, this natural market becomes more hopeless and a more responsibility is thus placed upon the Federal government to provide an adequate system of examination and inspection.

Inspecting Causes

More than 40 Per Cent of Deaths and Injuries

Twenty-nine of the 114 accidents occurred during starting in thirty-two air accidents, twenty persons were killed and thirty are injured—more than 40 per cent of the total. In other words, most flying in untrained areas was responsible for almost as many casualties as all other elements combined. Non stops flying is necessary to testing and essential to starting. It is believed advisable that all pilots have to start in that, in case of emergency, they can easily and quickly, if necessary, turn back and without fear. But the bulk of starting for third or dangerous, fatal in many instances, and always turned to good flying. A governmental system of control, holding starting in certain areas will meet such unfortunate cases as mentioned. In this connection, however, there is hope of several improvement. State Police and other agencies, state, the very best known, developed dynamic systems. For other areas had failed many people and caused many more under spectacular circumstances (such as collisions with grandstands, crashes on beaches, etc.) The New York State Fair Commission, according to press reports, designated the dare devil aerial aerial from the list of attractions.

The danger of collision in the air is not great, providing levels of flight for aircraft under way are established and

observed, and providing steering is controlled. The two fatalities reported occurred during stunts performances. In the first one man was killed, and in the second, two were killed and one lost.

Ground Safety on no Field

Eight accidents causing injury to seven persons are reported through casualties on the field. In several notable instances the pilot, in order to avoid the crowd which gathered in front of his machine as he was taking off or landing, deliberately winged his craft. In so many cases that every flying spectator, even the local police, did not take square warnings and were forced to keep back. That is illustrated by the long list of automobile cross track fatalities, where spectators get in the way. Only federal rules rigidly enforced are able to meet this condition.

Something for the Unknown

Finally, eight accidents which caused death to four and injury to nine are attributed to "unknown" causes. The hope of preventing accidents depends on learning—then correcting—the cause of such. It is evident that federal authority is required to obtain information in such cases.

Flying Not Dead

From the foregoing it is seen that flying, even with the burden of unnecessary hazard, imposed through the lack of a social code, is not unsafe.

Eliminating those deaths caused by non stops (20) and those attributed to lack of fields, weather reports and clearly defined air lanes or routes (5) which only federal authority can correct—35 fatalities remain—and to about every 12,000 passengers and one to 20,000 miles of travel—unadjusted, unregulated and uncontrolled.

In case of the 125 operating companies, which flew 300,000, 245 miles and carried 120,552 passengers on 336,736 flights, not a single fatality occurred in straight commercial activity. And it is from this record rather than from the dissenting pilot that the public should judge the safety of travel by air. These companies appreciate the condition of equipment and personnel which will be general when the federal government recognises its duty and responsibility.

Los Angeles Notes

Robert W. Powell of Los Angeles, has been elected president of the Aero Club of Southern California to succeed W. Gallois Scott, whose health has impeded his negotiations. Mr. Powell, who is connected with the Panza Oil Co., of Los Angeles, was a lieutenant in the Air Service and now serves overseas.

The Aero Club of Southern California now numbers in its active membership some of the most prominent residents of Southern California. It has been holding a series of open meetings planned to arouse public appreciation of aviation, and these have had a gratifying attendance. Glenn L. Martin and Bert H. Hinkler were among the speakers at these meetings.

Mr. G. G. Nichols, president of the Commercial Aircraft Association of Southern California, The Association now has more than fifty airplanes represented as its membership roll, and has lighter-than-air representatives also. An active campaign is being carried on to promote adequate legislation in Southern California cities. A new field has been opened at Santa Ana, Calif., about fifty miles southwest of Los Angeles, and the first meeting of the club was held there recently. It was deferred by twenty members of the Commercial Aircraft Association, who flew in the field and were extensively interested in business by the Santa Ana Chamber of Commerce.

The practical use of auto photography was strikingly illustrated in relation to city planning in Los Angeles recently when the Automobile Club of Southern California secured a series of auto photographic studies of the business section of

Los Angeles as an aid in solving a serious traffic congestion problem. The photographs, which were taken by Ralph Lake of the Pioneer Aerial Engineering Co., showed the anomalies in all streets in the central part of the city and also illustrated the movements of pedestrians. By this means the city planners were able to study actual conditions in a general view and to determine just where relief was possible.

Northwest Aeronautical Society

On April 19, a body of Seattle, Wash., men interested in aerial activities met and organized the Northwest Aeronautical Society for the purpose of furthering aerial activities in the Northwest. The society aims to maintain a concentrated technical library and to disseminate information both technical and library to enthusiasts and the general public.

It intends to hold classes, readings and lectures for the benefit of both beginners and advanced students of aerodynamics. To relieve the monotony of study and work as a practical demonstration of theories and designs advanced by members it is planned to hold a gliding and soaring meet during the first week in June.

Worldwide legislation favorable to aeronautics will be actively supported by the organization and assistance will be rendered the government in establishing an aerial defense for America.

The officers elected were: Orvin E. Ross, president; Walter Clayton, vice president; J. W. Miller, chief of technical staff; Arthur Sherman, secretary-treasurer.

Aeronautical Standardization

Standardization of Materials, Parts and Tools Desirable for Mass Production in Emergencies

(Continued from last issue)

Next to materials the most effective consideration can be in simplifying the use of a given part by internal, external, interlocked, or mortised washers. Under this heading we shall not only consider the various types of wire, namely, hard wire, stranded, and cable, but also streamline and round caged wires. In addition consideration will be given to all that goes to make up a complete wiring unit, such as terminals, shakers, resistors, shunters, and strain gauges and terminals.

Twisted Pair Wires.—For a pair of wires of high strength and small size in internal construction and where flexibility is of no importance. The detailed specifications of the SAE for this wire should be standard practice. The diameter of this wire should be given in Brown and Sharpe gauge. For standard use No 14 (0.064 in) SAE95, No 12 (0.080 in) SAE96, No 10 (0.102 in) SAE97, and No 8 (0.125 in) SAE98, while the tensile strength will vary from 1,000, 1,800, 2,600, and 3,600 lb, as recommended. For wires for thin wire strain gauges the size of wire for which they are designed is to be used.

Cirrus Pins and Posts.—Cutted cirrus pins should be used in all terminals and shakers, in all instances with the exception of surface resistors where the use of cutters with cutted ends is preferable.

Loops and Splices.—All was loops and splices should be made in accordance with the SAE standard for them.

Streamline and Standard Wires.—Effectively streamline wires are to be made of hard wire, stranded or caged, and caged wire is of exactly the same corresponding strength as that of an flat strand. However, as shown in Table 2 these strengths do approximate very closely, those of



Fig. 1 Standard sizes of streamline and caged wire (in Table 2).

Extra Flexible Aircraft Cables.—This is a high strength 7 by 19 extra flexible steel wire cable used as aileron, elevator, and rudder controls, and wherever great flexibility is desired. The SAE specifications for this wire are satisfactory for standard use. Sizes to be generally used are 3/16, 5/32, and 3/32 in. 2,000 lb tensile strength is required for the large size planes, and for towing cables or landing slings.

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There are also available SAE standards for cables to be used for shippping the above wires.

TABLE 1
STREAMLINE WIRES

STANDARD	T-S. WIRE	S	B	C	N	P	AREA		TENSILE
							IN. (MM.)	IN. (MM.)	
SAE95	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE96	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE97	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE98	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE99	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE100	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE101	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE102	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE103	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE104	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE105	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE106	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE107	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE108	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE109	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE110	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE111	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE112	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE113	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE114	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE115	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE116	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE117	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE118	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE119	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE120	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE121	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE122	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE123	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE124	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE125	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE126	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE127	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE128	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE129	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE130	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE131	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE132	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE133	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE134	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE135	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE136	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE137	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE138	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE139	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE140	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE141	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE142	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE143	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE144	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE145	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE146	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE147	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE148	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE149	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE150	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE151	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE152	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE153	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE154	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE155	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE156	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE157	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE158	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE159	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE160	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE161	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE162	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE163	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE164	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE165	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE166	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE167	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE168	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE169	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE170	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE171	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE172	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE173	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE174	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE175	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE176	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE177	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE178	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE179	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE180	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE181	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE182	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE183	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE184	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE185	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE186	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE187	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE188	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE189	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE190	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE191	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE192	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE193	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE194	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE195	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE196	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE197	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE198	1/16 (1.58)	1/16	1/16	1/16	1/16	1/16	0.001	0.001	100
SAE19									



WHERE WRIGHT AERONAUTICAL ENGINES ARE MADE

ACREAGE
ADDRESS
DESCRIPTION
EQUIPMENT

Approximately 7 acres, located on Main Line of Erie Railroad
50,000 square feet of building space
Four floors, size 75 ft by 300 ft. Concrete and steel heavy wall type
constructions, 250 pounds per square foot loading.

The plant is equipped at present to produce, and is producing, approximately
300 engines per year, with spare parts therewith, and has ample capacity
in addition to provide adequately for all engine part requirements for all
types of Wright engines up to 400 h.p. The plant is equipped to produce
the complete manufacture of various type engine parts, including
including housing and aluminum castings, except heat steril and deep forgings.

The capacity of the present plant could be expanded to produce engines

at the rate of five per day in the present building.

In an emergency

the plant is equipped to produce engines in other buildings and wings

and tail being produced within one or eight months to produce engines of any

one type in quantities of at least 25 per day.

The plant has employed during the past year an average of 450 people
which includes a complete Engineering Department and Experimental Shop.

WRIGHT AERONAUTICAL CORPORATION
PATERSON, NEW JERSEY, U. S. A.

Kentucky Encourages Aviation

The State of Kentucky is full cognizance of the importance of aviation in the economic and industrial life of the country as manifested by the recent action of the State Legislature in passing a resolution requesting all towns and cities in the Blue Grass State to pass a large letter to the nation and to respective towns and cities in such other states as may be observed by aviation passing over such towns and cities.

Capt. Harry B. Flomberg, A.A., stationed at Camp Perry, Ky., is directly responsible for the introduction and passage of this resolution. This officer is also endeavoring to work up interest in aviation in the other states of the Fifth Corps Area, and has had some resolution passed. Officers stationed at Goodrich Field, Camp Perry, Ky., are great believers in various localities throughout Kentucky, and the State is taking a very active interest in the development of aviation.

The resolution, as passed by the Commonwealth of Kentucky, is as follows:

"Whereas we are interested in letting cities in the subject of aviation, especially in the subject of carrying the mails by such method, and

"Whereas aviation experience much difficulty in ascertaining the name of many towns and cities over which they are flying, and

"Whereas there are but few natural objects near the main roads and roads that Commonwealth whereby such a motorist passing over the same can ascertain the names of such towns and cities, therefore

Be it resolved by the General Assembly of the Commonwealth of Kentucky:

Section 1. That the names of all towns and cities in this Commonwealth are hereby requested to have painted on letters sufficient to be read from an airplane, in permanent paint, the name of their respective towns and cities upon the top of some building or structure in order that aviators may ascertain such towns and cities may be able to ascertain readily the name of such towns or cities.

Section 2. That the Clerks of the Courts and the House of Representatives of the General Assembly of Kentucky shall cause to be copied copies of this resolution addressed to the mayor of each town and city in this Commonwealth.

Lift and Drag Effects on Wing-Tip Rake

N.A.C.A. Report No. 140

This report to A. F. Tamm, S. M. Baur, and G. C. Hall, of the National Advisory Committee for Aeronautics, deals with a description and report of tests carried out at the Washington Navy Yard on models of the BAEF, Albatross, and Biplane aerofins to determine the effectiveness of the conventional wingtip rake in improving aerofoil characteristics. Two degrees of rake were tested in each model, the trailing edge being always longer than the leading edge. The results are compared with those obtained by standard aerofins in use at the time the tests were conducted.

A copy of Report No. 140 can be obtained upon request from the National Advisory Committee for Aeronautics.

Spain Wants Aircraft

The Aeronautical Chamber of Commerce is informed that the Minister of War in Spain has solved the Cabinet for an appropriation of the equivalent of \$25,000,000. for the creation of an Air Service, to include 280 airplanes plus the necessary money and equipment.

Horacio Alfonso, First Class, Cienfuegos, Cuba, in transmitting this information, states: "I have been in business in my country for the past 12 years, and I am of course well acquainted with everybody interested in this line. Because of my continuous relationship and dealing that I have maintained with our Air Service, I think I am in a very good position for doing business with the Spanish Government."

Foreign News

Baileys—A report giving the official record of the activities of the Civil Aerial Transportation Co. in A.S.A.M. (Sudan American Aeroplane Line) which was established on January 1, 1923, to Nov. 30, 1931, shows that during this period a total of 4194 passengers were carried without accident, the actual flying time being 1380 hr for 40 min. Average as it was very soon, a comparison of the figures for 1929 and 1930 shows that the former was 1000 hr and the latter 1200 hr. During the period from Jan. 1 to May 24, 1930, the hours of flight totaled 377, and the number of passengers carried was 2318, while for the same period during 1929 the hours of flight totaled 3113, and the number of passengers carried was 363. As a matter of fact, the figures for the six months from June to November, 1930, given above, were greater than the figures for the two months in 1921, since in this latter period the hours of flight totaled 632 2/3 and the number of passengers carried was 1000, while there was no flying during the months of December, 1929, and January and February, 1930, due to unfavorable atmospheric conditions.

The above company is in operation at the airfields of Arco, Rio Esmeralda, Tafida and Cuyabito, and at its main place stations at San Esteban, Palmarca and Scherwaga.

England—In order to speed up the delivery of airdrops to Paris from Manchester or other principal towns in England, a single airplane service will shortly be inaugurated whereby parcels dispatched by passenger train after business hours during the day will be collected by a messenger-carrier who flies the London-Manchester and return between mid-morning and 1:45 p.m. and immediately thereafter to Paris, arriving at the latter leaving the London airdrome at 2:30 p.m. and scheduled to arrive at Paris at about 5:30 p.m. Upon arrival to Paris the goods will, by special arrangement, be passed through the French customs and delivered for delivery via Paris as soon as business hours are open. A similar arrangement is to be established in regard to airdrops with goods from provincial towns in the interior of the United Kingdom via airdrome bases early in the morning and parcels sent from the English Isles, after business hours one evening will be delivered to London the following morning, or in Manchester or other towns by the afternoon.

The night express which are now being built will be equipped with instruments and navigation lights for night flying and, in connection with the electrification of the London to Paris airdrome, soon to be completed, will make night flying a safe and regular operation.

Denmark—According to Flight (London) arrangements have been made for a passenger air mail service between Copenhagen and Copenhagen. The first airmail which will take the new service is to be Danish, although it is intended to use British machines and pilots. The plan is to have machines leave Copenhagen in the morning, after the arrival of the night boat from London, and it is expected that they will be able to reach Copenhagen shortly after noon, so that the mails should be distributed early in the afternoon in the two opposite directions. The first airmail will leave Copenhagen at 7:00 p.m. and the night boat will be in time to connect with the night boat to London. Thus, instead of taking 22 hr, the mails between London and Copenhagen will take the journey in about 21 hr.

The Netherlands—The Naval Aerial Navigation Co. (K.L.M. airship) of the Netherlands carried during 1931 a total of 1540 metric tons of mail, 30,200 metric tons of freight and 1674 passengers. The Amsterdam-London line accounted for more than half of the mail and merchandise, carrying 846 metric tons, 20,400 metric tons of freight and 1245 tons of passengers. The Amsterdam-Buenos Aires line, 1927, 1928 and 1929 passed passengers to the American Lines. Passengers and mail on the Rotterdam-Buenos Aires line, these figures indicate a marked increase over the 1929 volume of traffic, which totaled only 3 tons of mail, 25 tons of freight and 345 passengers.

ARMY AND NAVY AIR NEWS

Air Service

Engines	
Alduda 50 hp.	5
Alduda 90 hp.	26
Autocar-Duiser	1
Browne	22
W.M.W.	3
Brodhead Rotaries	5
Brodhead	11
Christie 130 hp.	17
Curtiss V-X	7
Curtiss V-3	1
Curtiss V-5	9
Curtiss V-6	1
Curtiss V-7	6
Curtiss OX-5	6024
Curtiss 8	1
Douglas-Douglas	2
Douglas	559
Ford	11
Graves 90 hp.	12
Graves 120 hp.	22
Graves 150 hp.	28
Graves 172 hp.	5
Hill-Street AB	28
Hill-Street A5	36
Hill-Street ATA	2314
Hill-Street AT7	1
Hill-Street Liberty 4	1
Hill-Street Liberty 6	325
Hill-Street Liberty 8	35
Hill-Street Liberty 10	35
Hill-Street Liberty 12	35
Hill-Street Liberty 14	35
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Hill-Street Liberty 22	35
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Mitchell Field—Reg. Gen. William Mitchell, Assistant Chief of Air Service, accompanied by First Lieut. L. J. Macmillan, A. S., arrived at Mitchel Field by air from Bolling Field on April 21. The General spent several days at Mitchel Field and vicinity inspecting the sites of several new air corps stations. He also visited all existing stations, including the post of the Thomas-Morse Aircraft Corp., Bingham, N. Y., and the William Mitchell Aircraft Corp., at Flushing Heights, N. Y. General Mitchell remained over for the Aviation Ball on the evening of Monday, April 24, and returned to Bolling Field on the following afternoon.

Captain Moloney—U.S.C.M.C., has arrived at Mitchel Field and relieved Lieutenant Miller as station pilot for the MBT. Lieutenant Miller has been absent on leave to the Coast of Maine where he has been taking a little plane. For the past few days he has been taking it over the mammom country as an effort to determine its maximum speed. The course over which plane has been flown has over a portion of two neighboring villages, Gales City and Weymouth. Captain Moloney has flown the plane rather low in order that he might stay directly over the villages and not be seen from the course.

The 5th Pursuit—Proceedings of three officers (Capts. Frank E. Farthing and Robert Clegg and Lieut. Arthur E. Gold) and 150 enlisted men, and the 5th Squadron (Bomber) consisting of three officers (Maj. Gen. W. M. Wright, who sailed from the States on the *Transport Thomas*), arrangements were made for an eleven-plane formation to escort the men to their destination. The men of the 5th Squadron, under the command of Major Wright, were to be transported to the 5th Pursuit Training Squadron in the afternoon of the same day. The departure of these squadrons induces the presence of Mitchel Field for about one-third.

Lieut. Eugene H. Berardino, A.S., returned to Mitchel Field on the afternoon of April 22, from the Coast of Maine. He spent three or four days flying over this place from Laupier Field to its destination, due to bad weather and motor trouble which necessitated several forced landings, all of which, however, were made without accident. The Eagle came through in good shape.

Army Orders—Major Raymond Sidney Bamberger, A. S., has been transferred to the Adjutant General's Department, with rank from April 1, 1922.

Colonel Frank M. Murphy, A. S. (C.M.), released from duty at Caribbean Field, Avordis, Fla., and from further detail in the Air Service, has been assigned to the 8th Infantry, Camp Travis, Tex.

Maj. Guy V. Balloch, Med. Corps, has been detailed to report to Mitchel Field, L. I., N. Y., for duty.

Capt. John C. Christopher, Q. C., has been detailed to report to Major Eugene H. Berardino, A. S., released from duty at Mitchel Field, Fort Self, Okla., to detail to the U. S. Military Academy, West Point, N. Y., for duty.

Capt. Joseph C. Morris, 33d Inf., detailed to the Air Service, is to report to Caribbean Field, Avordis, Fla., for duty.

Capt. Rudolph H. Warden, A. S., released from duty at the Hawaiian Dept., is assigned to duty at Langley Field, Hampton Roads.

Capt. Edwin J. House, A. S., released from duty at Langley Field, is assigned to duty in the Hawaiian Dept.

First Lieut. Arthur G. Watson, A. S., now on temporary duty and training states at Post Field, Fort Self, Okla., is released from further duty at Caribbean Field, Avordis, Fla., and will proceed to Pope Field, Fayetteville, N. C., and report to persons to the commanding officer for duty.

Survey of New Model Airway—Under instructions recently received from the Chief of Air Service, First Lieut. Clarence E. Crammer, A. S., has been detailed on duty to investigate the route of the Model Airway from Mitchel Field, L. I., New York, to Valley Field, N. J. This work includes the making of standard sketches and the reception of questionnaires on air intermediate fields, together with the taking of suitable photographs.

The fields and following points are being investigated, sketched and photographed: Valley Stream, L. I., Bellerose Park, L. I., Sheepshead Bay, New Dorp, Staten Island, Sandy Hook, N. J., Freehold, N. J., Prospect Park, N. J., Camp N. J., New Jersey, all names being the intermediate points of the Thomas-Morse Aircraft Corp., Bingham, N. Y., and the William Mitchell Aircraft Corp., at Flushing Heights, N. Y. General Mitchell remained over for the Aviation Ball on the evening of Monday, April 24, and returned to Bolling Field on the following afternoon.

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Clark Field—In preparation for the arrival of the new Philippine Department Commander, Maj. Gen. W. M. Wright, who sailed from the States on the *Transport Thomas*, arrangements were made for an eleven-plane formation to escort the men to their destination. The eleven planes were flown by the Philippine Department, the 5th Pursuit Squadron, and the 5th Observation Squadron. The planes began their hook at Clark Field in the afternoon by pilots from Camp MacArthur. At 4:45 a. m., March 6, an eleven-plane formation took off from Clark Field and flew to Manila Bay, where they were joined by the formation from Paracang Beach. They flew to meet the Thomas and escorted her to the pier.

Farfield Air Intermediate Report—Ondertaken in effect at the Farfield Air Intermediate Depot, Farfield, Calif., require that all pilots make at least one cross country flight each month for a distance of not less than 200 miles, and that during the course of these flights they will endeavor to locate a desirable landing field, preferably one which is not in use. "Good landing fields" are not to be overlooked. The pilot will be held in sufficient importance the pilot will be held out a questionnaire giving permanent concerning same. This is considered a good policy and, if adopted generally, should tend to improve present conditions with regard to shortage of landing fields.

18th Division, A. S.—Progress in the organization of the 18th Division, A. S., has been from rapid reconditioning conditions. Other Army Service units will be organized later. They will come under the head of "Army Troops." Nurses and qualifications are now being considered and set aside the 43rd Pursuit Squadron, Portland, Calif.; 43rd Pursuit Squadron, Denver, Colo.; 43rd Observation Squadron, Phoenix, Ariz.; 8th, 11th, and 43rd Observation Squadrons, Phoenix, Ariz. The 18th Army Service Groups or lighter-than-air units have been organized at Fort Self, Okla.

A keen interest in Air Service activities exists among certain officers. All that have been interviewed are anxious to get hold of the "old stock" again and make up again so in the possibility of a fifth-day training period. Some of them have shown enough interest to write their Congressman in Washington, asking them to make sufficient appropriation for the Reserve Training Camp and to sustain the four million dollar debt.

Capt. Charles A. Ferrell, A. S., was assigned to duty with the 18th Division, A. S. (2d Corps Area), with station at Colorado Springs, Colo. Two rooms in the Federal Building at Colorado Springs are set aside for the headquarters of this Division. Captain Ferrell, in his endeavor to obtain a suitable Army field at Colorado Springs or on the surrounding vicinity, has called recommendations on his part from the Chamber of Commerce, civic organizations and citizens of the community. He has already inaugurated a publicity campaign

May 22, 1922

AVIATION

Naval Aviation

Officers Selected for Aviation Training—The following fifty naval officers have been selected for aviation training at the Naval Air Station, Pensacola, Fla.

Lieut. (j.g.) M. D. Bugatti, Ense. E. G. Bain, Lieut. (j.g.) L. T. Burleigh, Ense. Wm. H. Burroughs, Ense. F. S. Cerdak, Ense. E. Corso, P. E. Durkin, Lieut. D. M. Farnsworth, Ense. A. C. Collins, Ense. Theo. S. Conner, Ense. Frank H. Conrad, Ense. Marion E. Cross, Ense. Richard H. Crossen, Ense. L. D. Davis, Ense. J. F. Curtis, Ense. E. G. DeLong, Ense. J. A. Dalton, Ense. A. H. Egan, Ense. H. F. Farnsworth, Ense. C. D. Farnsworth, Ense. E. H. G. Goss, Ense. A. O. Harrington, Ense. N. R. Hopkins, Ense. D. B. Johnson, Ense. H. S. Kestrel, Ense. D. E. Kitcham, Ense. C. D. Kofres, Ense. Eugene W. Kline, Ense. E. L. LaNier, Ense. J. S. Lyons, Ense. F. W. McFallan, Ense. E. L. Mershon, Ense. G. W. Morel, Lieut. (j.g.) J. C. Minter, Ense. E. F. Pace, Ense. C. E. Peterson, Lieut. (j.g.) A. O. Pease, Ense. G. E. Remond, Ense. J. A. Soto, Ense. E. V. Stroh, Ense. Thomas, Ense. A. S. Tuck, Ense. W. T. Tamm, Ense. G. T. Treadwell, Ense. H. J. Walker, Ense. E. W. Walker, Ense. Richard G. Wetting, Ense. B. Wyman, Ense. J. L. Wynter.

Hopkins Roads Naval Air Station—April 27 witnessed the completion of the comparative trials between straight-wing and ground drive Liberty engines on two P-51s at Hopkins Roads Air Station. A preliminary report on the trials indicates that the boat with the ground drive engine was able to take off in a few seconds sooner, and gave slightly better results. No definite distance has been reached yet but, however, pending further trials, although it is believed in some circles that geared drive may be employed eventually.

The Langley Board has recommended its positive flying and landing trials in the past week 182 previous landings and two positive ones on the dummy deck with a DH4B the two wings of which were stripped of fabric so as to permit very fast landing without taking of the deck. Two DH4Bs were assembled for the Anacostia Air Station.

The AF boat equipped with an Elan-Amphibious gear was tested recently at the station, safe landing and take-offs being made on land and in water.

The Langley trials CT made eight flights during the week, totaling 38 hrs. 27 mins. in the air, for the instruction of higher AF air personnel.

The newest tender Wright which reached Hopkins Roads last week after her cross south with the fleet, will proceed to Philadelphia, where she will probably remain a month. Lieutenant Commander Cogswell, of the Plans Section of the Bureau of Aeronautics, it is expected will soon be detailed to aid in Capt. A. W. Johnson, of the USAW Wright.

Pensacola Naval Air Station—Several naval free balloon tests and flights have been conducted at Pensacola in anticipation of the National Meet at Milwaukee the latter part of the month. It is anticipated that the Navy will enter two balloons, and the AF will enter one, Capt. E. H. Read, and the other by Lieutenant Commander Morehead.

Lieut. Hiss Hots, until recently on duty as engineer officer at the Pensacola Naval Air Station, has been ordered to the Bureau of Aeronautics, Washington. He will be replaced at Pensacola by Lieut. G. L. Coopse.

The landing field at Pensacola is in the course of improvement and is having a clay top arranged.

Anacostia Naval Air Station—Lieut. Harold F. Belden, USN, and Ense. Frank Miller, USN, of Indiana were killed on the afternoon of May 5 as a result of an aerial collision between two naval seaplanes over the Anacostia River near Belvoir Experiment Station. The two officers, flying a PTC plane, were making a propeller test when they collided head on with an SBS plane carrying Lt. Comdr. C. T. Johnson, C. O., of the Anacostia Naval Air Station, and Chief

Machinist C. W. Janske. It seems that the two machines started to close when the officer then out of the cockpit of Commander Johnson's plane got off a seat from the PTC in which Lieutenant Johnson and Ense. Miller were flying. The PTC was so badly damaged that she got out of control and fell running over several times until she hit the water and sank. The bodies of the two fliers were found in about 30 ft. of water. The Elan ship was less severely injured and Commander Johnson was able to keep her under control for a mile or so and make a landing, but as doing so the machine turned over sideways as one of the propellers had been torn off in the collision. Neither man of the Elan ship was injured.

Brig. Adm. William A. Moffett, Chief of Naval Aviation, flew to the scene of the accident as soon as he learned of it and paid a high tribute to the dead fliers, saying that "aviation has sacrificed its power as well as in war, and the two officers who lost their lives were martyrs to the cause of aviation."

The flying boat Santa Maria of the Association Airways landed near Anacostia after carrying some local newspaper men ashore, just before the accident.

Captain Wren in Washington—Captain Wren, R.A.F., formerly commander of the British R38 (R32) was in Washington last week and paid his respects to Admiral Moffett of the Navy Aeronautical Bureau.

Debris in Officers, R. N.—Lt. Comdr. Max. A. Müncher, Air Squadron, Pacific Fleet, to command Naval Air Station, Anacostia, D. C.

Lieut. Lyman C. Avery, Air Squadron, Pacific Fleet, to command Naval Air Station, Maryland.

Lieut. Lyman C. Avery, Air Squadron, Pacific Fleet, to Naval Air Station Pensacola, Fla.

Lieut. Fred G. Dickery, Air Squadron, Pacific Fleet, to Naval Air Station Pensacola, Fla.

Lieut. Edward A. Elliott, Air Squadron, Pacific Fleet, to Naval Air Station Pensacola, Fla.

Lieut. Richard M. Farren, Air Squadron, Pacific Fleet, to Naval Air Station Pensacola, Fla.

Lieut. Adolphus W. Gosling, Air Squadron, Pacific Fleet, to Naval Air Station Anacostia, D. C.

Lieut. Hattiege Irwin, Air Squadron, Pacific Fleet, to Naval Air Station Anacostia, D. C.

Coming Aeronautical Events

AMERICAN

May 28 — French Naval Aircraft Exhibition, Logue Field, Baltimore, Md.

May 31—National Seaplane Race, Milwaukee.

June 5-11—Flying Meet, Milwaukee, Wis.

Aug. 4—Detroit Air Derby, Detroit, Mich. (Compt. Aviation)

Aug. 15—Seattle Flying Derby, Seattle. (Pioneer Flying Meet)

Aug. 26—First Annual International Championship Meet. (In preparation)

FOREIGN

August — Coupe Jacques Schneider. (Seaplane speed record, Naples, Italy.)

Aug. 6—Gardiner-Brown Balloon Race, Geneva, Switzerland.

Aug. 6-20—Seaplane and Gliding Competition, Charente, France.

Aug. 24—Seaplane and Gliding Competition, Gernsheim, Germany.

Sept. 23—Coupe Henry Dunant de la Nautica. (Seaplane speed record, Paris, France.)

discretion elimination trials, if required, to be held about Aug. 23, at Mitchel Field, L. I.

Baltimore Air Meet, May 30

Every year since the close of the War the Baltimore Flying Club has held an aviation meet or as it is now called, an Exhibition of Aircraft. Each year's meet so far has proven to be a bigger success than the last. In 1919 there were hardly a half dozen ships on the field; in 1920 there were twelve or fourteen and the meet lasted an entire week. This, however, did not prove satisfactory for in 1921 the Club went back to the single day meet and drew the largest crowd they had up to



Ray Page, president of the Lincoln Standard Aircraft Corp.

that time, while the exhibiting ships numbered about twenty-five, including commercial planes, sport planes, Army planes and National Guard planes.

A departure is to be made this year in having an event for water ships, that is, seaplanes and flying boats. This is easily possible for Logan Field, as the Club's beautiful and well kept airdrome is within a few hundred yards of the Patapsco River, a wide and well protected landing harbor.

The principal event, however, will be for land planes and the contests will be divided into four classes: (1) for commercial planes designated as ships carrying useful load of 750 lb. or more; (2) for sport planes which includes all one, two and three seaters; (3) for service pilots, Army pilots, Navy pilots and Marine Corps pilots and (4) for National Guard pilots. For the first time prizes will be awarded, but they will not be for speed or high altitude but rather for efficient design and precision flying. This does not mean there will be no speed races, for there will be several, but rather that speed will be secondary to speed range.

It is expected that practically all the entrants at the New York Spring Flying Meet will participate in the Baltimore event, and a number of additional commercial entries will be received from the middle west.

Mechanics' Summer Course

American Airways, Inc., of College Point, Long Island, announce a summer course for air mechanics beginning June 1, at a special low rate. This company has an excellent staff of instructors and gives thorough courses in engine assembly, mechanics and overhaul; rigging, wing construction and covering; theory of flight, ignition and elementary radio.

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